

ABSTRACT OF THE DISCLOSURE

A resonance type optical modulator includes an optical path having electro-optical effect characteristics, a modulation electrode formed along the optical path for applying an electric field to the optical path, a common electrode formed in opposition to the modulation electrode, a feeding line that is connected to the modulation electrode and stubs connected to the feeding line, wherein the feeding line, stubs and common electrode are provided on one side of a region that is divided by the modulation electrode. A specific example is a resonance type optical modulator using a symmetric or an asymmetric electrode, that includes an optical path having electro-optical effect characteristics, a first stub (an open stub) (an open-ended asymmetric coplanar waveguide) or a short stub (a short-ended asymmetric coplanar waveguide), a second stub (an open or short stub) connected to the first stub, a feeding line connected to the first and second stubs and a common electrode, wherein the first and second stubs are formed along a single optical path to comprise a modulation electrode for applying an electric field to the optical path. As a result, the modulator has a configuration easy to fabricate without damaging the effective modulation field strength applied to the optical path, making it possible to realize high modulation efficiency with a low level of electric power.

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